

**INFORMATION CITED BY APPLICANTS THAT MAY BE MATERIAL
TO THE PROSECUTION OF THE SUBJECT APPLICATION**

Applicants: Jun Li et al. Attorney Docket No: DD.1.0038.US2
Serial No: 10/624,136 Group Art Unit: 1623
Filed: July 18, 2003 Examiner: Thurman K. Page
Title: BIODEGRADABLE TRIBLOCK COPOLYMERS, SYNTHESIS METHODS
THEREFORE, AND HYDROGELS AND BIOMATERIALS MADE THERE
FROM

U.S. PATENT DOCUMENTS

*Examiner Initial	ID	Document No.	Date	Name
<u>JA</u>	U687	4,449,938	05/22/1984	Pollak
<u>JA</u>	U688	6,096,303	08/01/2000	Fick

Examiner	Date Considered
<u>J. Page</u>	<u>11/9/2006</u>

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Q1	U608	5,565,215	10/15/1996	Gref et al.
	U661	5,543,158	08/06/1996	Gref et al.
	U662	US 6,545,097 B2	04/08/2003	Pinchuk et al.
	U663	US 2003/0082234 A1	05/01/2003	Seo et al.
	U664	US 2003/0143184 A1	07/31/2003	Seo et al.

FOREIGN PATENT DOCUMENTS

*Examiner Initial	ID	Document No.	Publication Date	Country	Translation Provided	
					Yes	No
	F181	WO 95/03357	02/02/1995	WIPO		
	F182	WO 01/45742 A1	06/28/2001	WIPO		
	F183	WO 02/47731 A2	06/20/2002	WIPO		
Q1	F184	WO 02/085337 A1	10/31/2002	WIPO		

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OTHER INFORMATION
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*Examiner Initial	ID	Document Information
<u>Qn</u>	O01643	Huh, K.M., et al., "Supramolecular-Structured Hydrogel by Inclusion Complexation of Poly(ethylene Glycol) Grafted Dextran with α -Cyclodextrin," <i>Polymer Preprints</i> 2001 42(2) :146-146 (2001).
<u>Qn</u>	O01644	Ooya, T., et al., "Biodegradable Polyrotaxanes Aiming at Biomedical and Pharmaceutical Applications," <i>Biomedical Polymers and Polymer Therapeutics</i> , Edited by Chiellini <i>et al.</i> , Kluwer Academic/Plenum Publishers, New York, 2001, pp.75-90.

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<u>J. Meyer</u>	<u>11/9/2006</u>

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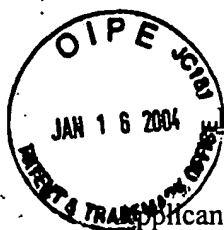
*Examiner Initial	ID	Document No.	Date	Name
<u>QA</u>	U650	US 2003/087985 A1	05/08/2003	Hubbell et al.
<u>QA</u>	U651	US 2002/0193812 A1	12/19/2002	Patel et al.

QA Examiner 11/19/2006 Date Considered

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JA	U101	5,324,718	06/28/1994	Loftsson
	U132	5,472,954	12/05/1995	Loftsson
	U156	US 6,331,311 B1	12/18/2001	Brodbeck et al.
	U192	6,083,534	07/04/2000	Wallach et al.
	U205	5,922,340	07/13/1999	Berde et al.
	U209	5,942,241	08/24/1999	Chasin et al.
	U327	5,968,543	10/19/1999	Heller et al.
	U364	5,939,453	08/17/1999	Heller et al.
	U365	5,324,775	06/28/1994	Rhee et al.
	U398	4,716,203	12/29/1987	Casey et al.
	U399	5,476,909	12/19/1995	Kim et al.
	U400	5,384,333	01/24/1995	Davis et al.
JA	U401	5,702,717	12/30/1997	Cha et al.

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Q1	U402	US 2002/0019369 A1	02/14/2002	Li et al.
	U492	US 6,420,432 B2	07/16/2002	Demopoulos et al.
	U500	5,298,410	03/29/1994	Phillips et al.

FOREIGN PATENT DOCUMENTS

*Examiner Initial	ID	Document No.	Publication Date	Country	Translation Provided	
					Yes	No
	F098	EP 0510356 A1	28/10/1992	EP		
	F121	WO 95/11924	04/05/1995	WIPO		
	F122	WO 00/40962	13/07/2000	WIPO		
	F123	WO 00/64977	02/11/2000	WIPO		
	F124	WO 00/33885	15/06/2000	WIPO		
	F125	WO 00/50007	31/08/2000	WIPO		
	F171	WO 01/07067 A2	01/02/2001	WIPO		

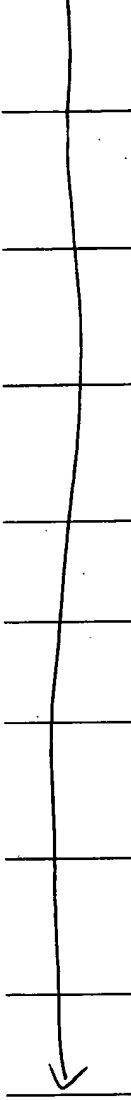
OTHER INFORMATION

(Including Author, Title, Date, Pertinent Pages, Etc.)

*Examiner Initial	ID	Document Information
	000315	Song, C.X., et al., "Formulation and characterization of biodegradable nanoparticles for intravascular local drug delivery," <i>Journal of Controlled Release</i> , 43:197-212 (1997).
	001043	Jeong, B., et al., "Drug release from biodegradable injectable thermosensitive hydrogel of PEG-PLGA-PEG triblock copolymers," <i>Journal of Controlled Release</i> , 63:155-163 (2000).
	001056	Watanabe, J., et al., "Effect of acetylation of biodegradable polyrotaxanes on its supramolecular dissociation via terminal ester hydrolysis," <i>J. Biomater. Sci. Polymer Edn.</i> , 10(12):1275-1288 (1999).
Q1	001057	Yui, N., et al., "Effect of Biodegradable Polyrotaxanes on Platelet Activation," <i>Bioconjugate Chem.</i> , 9:118-125 (1998).

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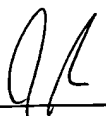
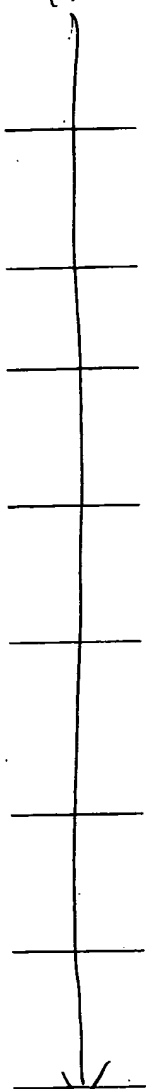
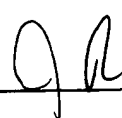
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9A

- 001058 Ooya, T., et al., "Regulation of intracellular metabolism by biodegradable polyrotaxanes," *J. Biomater. Sci. Polymer Edn.*, **9(4)**:313-326 (1998).
- 001059 Ooya, T., et al., "Synthesis and characterization of biodegradable polyrotaxane as a novel supramolecular-structured drug carrier," *J. Biomater. Sci. Polymer Edn.*, **8(6)**:437-455 (1997).
- 001060 Ooya, T., et al., "Synthesis of theophylline-polyrotaxane conjugates and their drug release via supramolecular dissociation," *Journal of Controlled Release*, **58**:251-269 (1999).
- 001061 Ooya, T., et al., "Polyrotaxanes: Synthesis, Structure, and Potential in Drug Delivery," *Critical Reviews in Therapeutic Drug Carrier Systems*, **16(3)**:289-330 (1999).
- 001100 Doi, Y., "Microbial Polyesters," *VCH Publishers, Inc.*, pp. 99-106 (1990).
- 001101 Bailey, Jr., F.E., et al., "Poly(ethylene oxide)," Academic Press, Inc., pp.105-141 (1976).
- 001104 Bae, Y.H., et al., "Biodegradable amphiphilic multiblock copolymers and their implications for biomedical applications," *Journal of Controlled Release*, **64**:3-13 (2000).
- 001105 Bromberg, L.E., et al., "Temperature-responsive gels and thermogelling polymer matrices for protein and peptide delivery," *Advanced Drug Delivery Reviews*, **31**:197-221 (1998).
- 001106 Herold, D., et al., "Oxidation of Polyethylene Glycols by Alcohol Dehydrogenase," *Biochemical Pharmacology*, **38(1)**:73-76 (1989).
- 001107 Jeong, B., et al., "Thermosensitive sol-gel reversible hydrogels," *Advanced Drug Delivery Reviews*, **54**:37-51 (2002).
- 001108 Kissel, T., et al., "ABA-triblock copolymers from biodegradable polyester A-blocks and hydrophilic poly(ethylene oxide) B-blocks as a candidate for in situ forming hydrogel delivery systems for proteins," *Advanced Drug Delivery Reviews*, **54**:99-134 (2002).

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- O01109 Jenekhe, S.A., et al., "Self-Assembly of Ordered Microporous Materials from Rod-Coil Block Copolymers," *Science*, **283**:372-375 (15 January 1999).
- O01110 Kukula, H., et al., "The Formation of Polymer Vesicles or "Peptosomes" by Polybutadiene-*block*-poly(L-glutamate)s in Dilute Aqueous Solution," *J. Am. Chem. Soc.*, **124**(8):1658-1663 (2002).
- O01111 Jeong, B., et al., "Biodegradable block copolymers as injectable drug-delivery systems," *Nature*, **388**:860-862 (28 August, 1997).
- O01112 Van Hest, J.C.M., et al., "Polystyrene-Dendrimer Amphiphilic Block Copolymers with a Generation-Dependent Aggregation," *Science*, **268**:1592-1595 (16 June 1995).
- O01115 Förster, S., et al., "Amphiphilic Block Copolymers in Structure-Controlled Nanomaterial Hybrids," *Advanced Materials*, **10**(3):195-217 (1998).
- O01116 Alexandridis, P., et al., "Poly(ethylene oxide)-poly(propylene oxide)-poly(ethylene oxide) block copolymer surfactants in aqueous solutions and at interfaces: thermodynamics, structure, dynamics, and modeling," *Physicochemical and Engineering Aspects*, **96**:1-46 (1995).
- O01117 Hirt, T.D., et al., "Telechelic diols from poly[(R)-3-hydroxybutyric acid] and poly{[(R)-3-hydroxybutyric acid]-*co*-[(R)-3-hydroxyvaleric acid]}," *Macromol. Chem. Phys.*, **197**:1609-1614 (1996).
- O01118 Jeong, B., et al., "Thermoreversible Gelation of PEG-PLGA-PEG Triblock Copolymer Aqueous Solutions," *Macromolecules*, **32**:7064-7069 (1999).
- O01119 Alexandridis, P., "Amphiphilic copolymers and their applications," *Current Opinion in Colloid and Interface Science*, **1**:490-501 (1996).
- O01221 Shuai, X., et al., "Formation of Inclusion Complexes of Poly(3-hydroxybutyrate)s with Cyclodextrins. 1. Immobilization of Atactic Poly(R,S-3-hydroxybutyrate) and Miscibility Enhancement between Poly(R,S-3-hydroxybutyrate) and Poly(ϵ -caprolactone)," *Macromolecules*, **35**:3126-3132 (2002).

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- O01222 Shuai, X., et al., "Stereoselectivity in the Formation of Crystalline Inclusion Complexes of Poly (3-hydroxybutyrate)s with Cyclodextrins," *Macromolecules*, **35**:3778-3780 (2002).
- O01223 Shuai, X., et al., "Inclusion Complex Formation between α , γ -Cyclodextrins and a Triblock Copolymer and the Cyclodextrin-Type-Dependent Microphase Structures of Their Coalesced Samples," *Macromolecules*, **35**:2401-2405 (2002).
- O01224 Wei, M., et al., "Manipulation of Nylon-6 Crystal Structures with Its α -Cyclodextrin Inclusion Complex," *Macromolecules*, **35**:8039-8044 (2002).
- O01226 Wei, M., et al., "Compatibilization of Polymers via Coalescence from Their Common Cyclodextrin Inclusion Compounds," *Macromolecules*, **34**:4061-4065 (2001).
- O01274 Kim, I.S., et al., "Thermo-responsive self-assembled polymeric micelles for drug delivery in vitro," *International Journal of Pharmaceutics*, **205**:165-172 (2000).
- O01275 Jeong, Y.I., et al., "Adriamycin release from flower-type polymeric micelle based on star-block copolymer composed of poly(γ -benzyl L-glutamate) as the hydrophobic part and poly(ethylene oxide) as the hydrophilic part," *International Journal of Pharmaceutics*, **188**:49-58 (1999).
- O01276 Kim, S.Y., et al., "Preparation of characterization of biodegradable nanospheres composed of methoxy poly(ethylene glycol) and DL-lactide block copolymer as novel drug carriers," *Journal of Controlled Release*, **56**:197-208 (1998).
- O01327 Li, J., et al., "Sol-Gel Transition during Inclusion Complex Formation between α -Cyclodextrin and High Molecular Weight Poly(ethylene glycol)s in Aqueous Solution," *Polymer Journal*, **26**(9):1019-1026 (1994).
- O01349 Ooya, T., et al., "Synthesis of a biodegradable polymeric supramolecular assembly for drug delivery," *Macromol. Rapid Commun.*, **16**:259-263 (1995).

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- QA
- O01350 Loftsson, T., "Increasing the cyclodextrin complexation of drugs and drug bioavailability through addition of water-soluble polymers," *Pharmazie*, 53:733-740 (1998).
- O01530 Amiel, C.; et al., "New Associating Polymer Systems Involving Water Soluble β -Cyclodextrin Polymers," *J. Inclusion Phen. Mol. Recogn.*, 25:61-67 (1996).
- O01594 Gogolewski, S., et al., "Tissue Response and in vivo degradation of selected polyhydroxyacids : poly(lactides (PLA), poly(3-hydroxybutyrate) (PHB), and poly(3-hydroxybutyrate-co-3-hydroxyvalerate (PHB/VA)," *J. Biomed. Mater. Res.*, 27:1135-1148 (1993) (Abstract Only).
- O01597 Harada, A., et al., "Double-stranded inclusion complexes of cyclodextrin threaded on poly(ethylene glycol)," *Nature*, 370:126-128 (14 July 1994).
- O01600 Li, J., et al., "Inclusion Complexation and Formation of Polypseudorotaxanes between Poly[(ethylene oxide-*ran*-(propylene oxide))] and Cyclodextrins, *Macromolecules*, 34:8829-8831 (2001).
- O01601 Li, J., et al., "Formation of Supramolecular Hydrogels Induced by Inclusion Complexation between Pluronic and α -Cyclodextrin," *Macromolecules*, 34:7236-7237 (2001).
- O01602 Noda, T, et al., "Micelle Formation of Random Copolymers and Sodium 2-(Acrylamido)-2-methylpropanesulfonate and a Nonionic Surfactant Macromonomer in Water as Studied by Fluorescence and Dynamic Light Scattering," *Macromolecules*, 33:3694-3704 (2000).
- O01603 Wilhelm, M., et al., "Poly(styrene-ethylene oxide) Block Copolymer Micelle Formation in Water: A Fluorescence Probe Study," *Macromolecules*, 24:1033-1040 (1991).
- ✓
- O01604 BASF, "Pluronic & Tetronic Surfactants," BASF Corporation, Mount Olive, New Jersey, 29 pages (1989).
- QA
- O01605 Leong, K.W., et al., "DNA-polycation nanospheres as non-viral gene delivery vehicles," *Journal of Controlled Release*, 53:183-193 (1998).

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- QA
- O01607 Chen, G., et al., "Graft copolymers that exhibit temperature-induced phase transitions over a wide range of pH," *Nature*, 373:49-52 (5 January 1999).
- O01610 Harada, A., et al., "Preparation and Properties of Inclusion Complexes of Poly(ethylene glycol) with α -Cyclodextrin," *Macromolecules*, 26:5698-5703 (1993).
- O01611 Harada, A., et al., "Preparation and Characterization of Inclusion Complexes of Polyisobutylene with Cyclodextrins," *Macromolecules*, 29:5611-5614 (1996).
- O01612 Harada, A., et al., "The molecular necklace: a rotaxane containing many threaded α -cyclodextrins," *Nature*, 356:325-327 (26 March 1992).
- O01613 Li, J., et al., "Conformational Analysis of Oligomers of (*R*)-3-Hydroxybutanoic Acid in Solutions by ^1H NMR Spectroscopy," *Bull. Chem. Soc. Jpn.*, 71:1683-1689 (1998).
- QA
↓
O01614 Li, J., et al., "Conformational Behavior of Methyl (3*R*)-3-{{3'*R*)-3'-Hydroxybutanoyl}oxy} butanoate in Solutions: Effect of Intramolecular Hydrogen Bond," *Bull. Chem. Soc. Jpn.*, 70:1887-1893 (1997).

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